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IN THE CLAIMS

1-12. Canceled

13. (Currently Amended) A probe for analyzing an extended object, the extended object having plural sub-objects, the probe comprising a body having an edge, the edge having a thickness less than a relevant dimension of one of said sub-objects, and a ~~length~~ width substantially greater than a relevant dimension of one of said sub-objects.

14. (Original) A probe as in claim 13 wherein said probe includes a material that hybridizes with at least one known sub-object of said plural sub-objects.

15. (Currently Amended) A probe for analyzing an object, the probe comprising a body having an analyzing region, the analyzing region having a thickness dimension less than a relevant dimension of ~~one (or more) of said object objects~~, and a width substantially greater than a relevant dimension of one of said objects.

16-18. (Canceled)

19-33. (Canceled)

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34. (Previously Presented) A probe as in claim 13, wherein said body is formed of an electrically conductive material.
35. (Previously Presented) A probe as in claim 13, wherein said body is formed of a single layer or a predictable number of layers derived from a lamellar material.
36. (Previously Presented) A probe as in claim 35, wherein the lamellar material is selected from the group consisting of super lattices,  $\text{MoS}_2$ ,  $\text{NbSe}_2$ ,  $\text{Bi}_2\text{Sr}_2\text{CaCu}_2\text{O}_x$ , graphite, mica, boron nitride, dichalcogenides, trichalcogenides, tetrachalcogenides, pentachalcogenides and hydrotalcite-like materials.
37. (Previously Presented) A probe as in claim 13, wherein said body is a single layer or a predictable number of layers of graphene.
38. (Previously Presented) A probe as in claim 13, wherein the extended object to be analyzed is a biopolymer comprised of nucleobases as the sub-objects.
39. (Previously Presented) A probe as in claim 13, wherein the extended object to be analyzed is a deoxyribose nucleic acid molecule comprised of nucleobases as the sub-objects.
40. (Previously Presented) A probe as in claim 13, wherein the extended

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object to be analyzed is a ribose nucleic acid molecule comprised of nucleobases as the sub-objects.

41. (Previously Presented) A probe as in claim 13, wherein the extended object to be analyzed is a polypeptide molecule comprised of amino acids as the sub-objects.

42. (Previously Presented) A probe as in claim 15, wherein said body is formed of an electrically conductive material.

43. (Previously Presented) A probe as in claim 15, wherein said body is formed of a single layer or a predictable number of layers derived from a lamellar material.

44. (Previously Presented) A probe as in claim 43, wherein the lamellar material is selected from the group consisting of super lattices,  $\text{MoS}_2$ ,  $\text{NbSe}_2$ ,  $\text{Bi}_2\text{Sr}_2\text{CaCu}_2\text{O}_x$ , graphite, mica, boron nitride, dichalcogenides, trichalcogenides, tetrachalcogenides, pentachalcogenides and hydrotalcite-like materials.

45. (Previously Presented) A probe as in claim 15, wherein said body is a single layer or a predictable number of layers of graphene.

46. (Previously Presented) A probe as in claim 15, wherein the extended

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object to be analyzed is a biopolymer comprised of nucleobases as the sub-objects.

47. (Previously Presented) A probe as in claim 15, wherein the extended object to be analyzed is a deoxyribose nucleic acid molecule comprised of nucleobases as the sub-objects.
48. (Previously Presented) A probe as in claim 15, wherein the extended object to be analyzed is a ribose nucleic acid molecule comprised of nucleobases as the sub-objects.
49. (Previously Presented) A probe as in claim 15, wherein the extended object to be analyzed is a polypeptide molecule comprised of amino acids as the sub-objects.
50. (New) A probe as in claim 15, wherein the probe is a structure comprising an analyzing region of thickness  $t$ , and width  $w$  and the ratio  $w/t$  is larger than 5.
51. (New) A probe as in claim 15, wherein the probe is a structure comprising an analyzing region of thickness  $t$ , and width  $w$  and the ratio  $w/t$  is larger than 10.
52. (New) A probe as in claim 15, wherein the probe is a structure comprising an analyzing region of thickness  $t$ , and width  $w$  and the ratio  $w/t$  is larger than 100.
53. (New) A probe as in claim 15, wherein the probe is a structure comprising an analyzing region of thickness  $t$ , and width  $w$  and the ratio  $w/t$  is larger than 1000.